

### ABSTRACT OF THE DISCLOSURE

A method is disclosed for high-throughput screening assay sample preparation and testing for the identification of binding between drug targets and library compounds, for use with a calorimetric device measuring the enthalpy of reaction for the binding. The method includes mixing a library compound with a specified solvent and mixing a target compound solution with a second specified solvent on a calorimetric device. The library compound/solvent is merged with the target compound/solvent solution and the library compound/solvent solution is also merged with a third solvent solution on the calorimetric device. The heats of reaction are detected for both merged solutions and are compared.